Polish epidemiological and statistical data, and a systematic review (proportion of patients treated with antipsychotic drugs who withdrew because of adverse events). Current and predicted market shares were assessed on the basis of present sales level data. **RESULTS:** In the first scenario, NHF expenditures on atypical antipsychotic drugs will increase by: 13 mln PLN in 2010, 20 mln PLN in 2011 and 26 mln PLN in 2012. In the second scenario of no sertindole reimbursement NHF expenditures on atypical antipsychotic drugs will increase by: 11 mln PLN in 2010, 18 mln PLN in 2011 and 23 mln PLN in 2012. From patient's perspective, expenditures will increase in 2010–2012 by 0.9 mln PLN 1.3 mln PLN and 1.7 mln respectively in scenario with sertindole reimbursement, while in a second scenario costs will increase in 2010–2012 by 1.1 mln PLN, 1.6 mln PLN and 2.0 mln PLN respectively. The 2009 weighted average exchange rate of Polish National Bank was €1 = PLN 4.3273. **CONCLUSIONS:** Reimbursement of sertindole would result in a minor increase in Polish NHF expenditures. Simultaneously, it would enlarge the scope of accessible therapies for patients intolerant to at least one other antipsychotic agent.

PMH10

COST SAVING POTENTIAL OF GENERIC SUBSTITUTION: THE CASE OF ANTIDEPRESSANTS

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OBJECTIVES: Generic medicines are generally considerably less expensive than branded products and their endorsement can lead to substantial savings in costs. The main objective of the study was to calculate potential cost savings that can be generated by generic substitution of antidepressants within the private health care sector of South Africa. **METHODS:** Data on computerised medicine claims of patients receiving one or more antidepressants during three consecutive years (i.e. 2004, 2005 and 2006) were elicited from a South African pharmaceutical benefit management company. a non-experimental, quantitative, retrospective drug utilization review was conducted and data were analyzed using the Statistical Analysis System® programme. Potential cost savings defined as the collective amount that could be saved annually by substituting the average price of innovator active substances for that of generic equivalent(s) were computed for criteria-eligible substances in the study population. All costs are expressed in $U.S. **RESULTS:** A total of 292,071 items (N = 5,982,869) on 273,673 prescriptions (N = 5,213,765) at a total cost of $8,652,289.48 (N = $207,316,483.10) were included in the study. Generic products constituted 58.7% (n = 292,071) of all antidepressants claimed, at a total cost of 28.2% (N = $207,316,483.10) of all incurred costs. With total substitution of the average price of all criteria-eligible innovators, a potential saving of 9.3% (N = $8,652,289.48) of the actual antidepressant cost over the study period, was calculated. **CONCLUSIONS:** In developing countries with limited health care budgets, such as South Africa, generic substances can be cost-saving treatment alternatives. Health care professionals, third-party payers, and patients all have fundamental roles to play in order to encourage greater use of generics. Medicine expenditure can thereby be reduced and access to scarce resources increased, in order to meet the pressing health care needs within South Africa.

PMH11

BUDGET IMPACT ANALYSIS OF AMISULPRIDE IN TREATMENT OF SCHIZOPHRENIA IN POLAND

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OBJECTIVES: To estimate the impact of amisulpride continued reimbursement in schizophrenia treatment on payer's budget in Poland. **METHODS:** The analysis was performed in 5-year time horizon from the payer (National Health Fund, NHF) perspective and payer + patient perspective. Only costs of medicines were included. On the base of IMS Health Poland sale data for years 2005–2010 linear regression was conducted to predict consumption and prevalence of antipsychotics in Poland. Cost data of medicines were obtained from Ministry of Health and medicine portals in case of lack of reimbursement. One-way sensitivity analysis were performed for the key input parameters. **RESULTS:** From the payer perspective, cost of amisulpride is approximately €7.13 million in 2010 and €9.15 million in 2014 and it represents from 4.62% in 2010 to 4.28% in 2014 of the total cost of schizophrenia treatment estimated at approximately €154.22 million in 2010 and €213.87 million in 2014. From the payer + patient perspective, cost of amisulpride is approximately €7.26 million in 2010 and €9.32 million in 2014 and it represents from 4.01% in 2010 to 3.85% of the total cost of schizophrenia treatment estimated at approximately €181.11 million in 2010 and €241.81 million in 2014. Increase of NHF and patients expenses is related to an increase of antipsychotics sales over a span of the next five years caused by expanding awareness of schizophrenia and the importance of treatment. **CONCLUSIONS:** Our findings suggest that the cost of treatment with amisulpride are at a reasonable level and represent a small proportion of the total costs of schizophrenia treatment both from the payer perspective and common payer + patient perspective. The declining trend in the share of amisulpride cost in total cost of schizophrenia is noticeable. Amisulpride is an alternative therapeutic option of schizophrenia treatment in Poland and its reimbursement from public funds is justified.

PMH12

COST IMPACT OF INITIATING PREGABALIN TREATMENT IN SWEDISH PATIENTS WITH GENERALIZED ANXIETY DISORDER

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OBJECTIVES: To compare the health care costs 6 months prior to and 6 months after initiation of pregabalin in generalized anxiety disorder (GAD) patients in Sweden. **METHODS:** This was a retrospective longitudinal database study of GAD patients from the South-West region of Sweden (1.5 million inhabitants). Individual patient data on health care visits (outpatient, inpatient, primary care), costs, mortality and diagnoses were included from year 2000. Data from the Swedish Prescribed Drug Register were included from July 1, 2005 until December 31, 2007. Patients with a GAD (ICD-10 F41.1) diagnosis and who initiated pregabalin treatment in 2006 were included. Health care utilization was measured six months before and six months after pregabalin initiation. Patients with 2 or more prescriptions of benzodiazepines six months prior to pregabalin initiation were categorized as benzodiazepine patients. Non-parametric statistical tests (Mann-Whitney) were used for the cost and resource use comparisons. **RESULTS:** A total of 149 patients met the inclusion criteria, of whom 99 used benzodiazepines prior to pregabalin treatment. The number of in-patient ($P < 0.05$) and primary care ($P < 0.05$) visits significantly decreased in the 6-month period following pregabalin initiation. There was also a statistically significant reduction ($p = 0.0004$) in overall health care costs from SEK 71,000 (€7,408) to SEK 45,000 (€4,695). Among the benzodiazepine users (n = 99), the number of in-patient visits ($p = 0.0213$), days in hospital ($p = 0.0026$) and primary care visits ($p = 0.0121$) were all statistically significantly reduced following pregabalin initiation. The reduction in total cost (from SEK 79,000 to SEK 43,000; €8,243 to €4,486) among the users of benzodiazepines was also statistically significant ($p = 0.0001$). The decrease in total cost, in all patients as well as benzodiazepine treated, was to a large extent explained by the decrease in in-patient costs. **CONCLUSIONS:** Initiating treatment with pregabalin in GAD patients significantly reduced health care utilization and costs during the following 6 months.

PMH13

COSTS ASSOCIATED WITH ANTIPSYCHOTIC MEDICATIONS FOR PATIENTS WITH A BIPOLAR DIAGNOSIS AT CLINICALLY RECOMMENDED DOSES

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OBJECTIVES: There is accumulating evidence of sub-therapeutic second-generation antipsychotic (SGA) dosing for patients diagnosed with bipolar disorder, leading to suboptimal control of disease and higher overall treatment costs. The objectives of this study were to identify Medicaid bipolar patients receiving clinically effective doses of SGAs and compare their medical costs. **METHODS:** Patients with bipolar disorder taking an oral SGA (aripiprazole, olanzapine, quetiapine, risperidone or ziprasidone) were identified in Medicaid claims databases (2005–2008) from 8 US states. Patients were followed for 18 months (6-month pre-index period during which patients did not receive an SGA, followed by a 12-month post-index utilization period to determine total costs). For patients on recommended dosing, costs were compared using a generalized linear model with a gamma distribution and log-link function. Baseline covariates (age, gender, race, pre-index costs, Charlson co-morbidity score, and specific psychiatric co-morbidities) were adjusted for. Ziprasidone-treated patients comprised the reference group. **RESULTS:** A total of 2446 patients met inclusion criteria, with 45% (N = 1102) taking clinically effective doses by day 61 of their follow-up period. Patients on quetiapine had the lowest percentage of effective dosing at 26% (N = 280/1072). Other results were aripiprazole 77% (N = 336/448), olanzapine 52% (N = 118/226), risperidone 50% (N = 238/474), and ziprasidone 58% (N = 130/226). Regression analyses indicated that mental health-related prescription costs ($P < 0.01$) and all-prescription costs ($P < 0.01$) were statistically significantly lower for the risperidone group compared to the ziprasidone group. There were no significant differences between the groups for total mental health-related costs or total all-cause costs (includes prescription and medical services). **CONCLUSIONS:** Less than half of the patients in this sample were prescribed clinically recommended doses 2 months after their initial start. Among patients using recommended doses, while those on risperidone had lower prescription costs, there were no significant differences for total costs compared to patients taking ziprasidone.

PMH14

COST ANALYSIS OF ADVERSE EVENTS ASSOCIATED WITH TREATMENT OF BIPOLAR DISORDER: A COMPARISON BETWEEN ARIPIPRAZOLE AND OLANZAPINE IN THE SPANISH HEALTH SYSTEM

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OBJECTIVES: This study investigates the health care costs of adverse events (AE) associated with treatment of bipolar disorder with two atypical antipsychotics (AA): aripiprazole (ARI) and Olanzapine (OLA). **METHODS:** It was performed a cost analysis through a markov model considering the following health states: no existence

of adverse events (NAE); extrapyramidal symptoms (EPS); weight gain (WG); and sexual dysfunction (SD). The transition probabilities amongst health states were estimated from two different meta-analysis of clinical trials and from a retrospective Spanish study. The health care costs associated to each health state were obtained from a published Spanish study. It was used the minimum acquisition cost per mg. of the mean daily dose, for each AA, which is regarded as a relevant efficiency criterion in Hospital Pharmacy Departments. The time horizon applied in the analysis was 12 months. a probabilistic sensitivity analysis was performed for all the variables involved in the analysis via Monte Carlo simulations. All costs were inflated to 2009 costs using Spanish Health System pay and prices index. **RESULTS:** In comparison with OLA, the treatment with ARI generates annual average cost savings per patient of €–688.70 ± 21.69 (CI 95% –614.52; –729.18). In the most unfavourable scenario for ARI, that in which we assumed that ARI may have a similar rate of sexual dysfunction than that of quetiapine (i.e. the lowest rate amongst AA) the costs savings per patient would be €–270,94 ± 17,11 (CI 95% –237,20; –303,48). **CONCLUSIONS:** The results of this analysis show that patients treated with aripiprazole demonstrate lower adverse events costs in comparison to olanzapine. This difference may generate significant cost savings to the Spanish health system in the treatment of patients affected by bipolar disorders. The robustness of the results was tested via a probabilistic sensitivity analysis.

PMH15

REAL-WORLD TREATMENT PATTERNS AND HEALTH CARE RESOURCE UTILIZATION IN GENERALISED ANXIETY DISORDER (GAD): A RETROSPECTIVE UNITED STATES DATABASE ANALYSIS

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OBJECTIVES: Real-world treatment patterns and health care resource utilization for patients with GAD in the United States are not fully defined. **METHODS:** Data from the 2003–2007 Thomson Reuters MarketScan® Commercial Claims and Encounters and Medicare Supplemental and Coordination of Benefits databases were utilised for analysis. For the current analysis, participants with a diagnosis of GAD (ICD-9 CM 300.02) between January 1, 2004 and December 31, 2006 were included. The sample was divided into the following five subgroups: patients receiving non-pharmacological treatment, first-line therapy only, first-line + augmentation within 90 days of index prescription, first-line + switch within 90 days of index prescription and second-line therapy only. Additionally, GAD patients were compared with healthy controls without GAD or other mental health conditions. **RESULTS:** In total, 23,553 GAD patients (mean age range: 41.6–48.1 years; 56.1–68.6% female across the five groups) were included (non-pharmacological, n = 7055; first-line only, n = 6538; first-line + augmentation, n = 903; first-line + switch, n = 1953; second-line only, n = 7104). Paroxetine was the most commonly used first-line treatment at index (first-line cohorts: 48%, 42%, 41%, respectively). In the second-line only cohort, a benzodiazepine (37%) or second-line SSRI/SNRI (27%) were the most commonly used agents at index. Benzodiazepines were the most commonly prescribed agents for augmentation of, or switching from, first-line treatments (augmentation 52%, switch 44%). Overall, GAD patients had higher health care utilization and significantly higher total health care costs versus healthy controls (mean per patient: $8058 vs. $2938, $P < 0.0001$). On average, GAD patients incurred an additional $425/month in direct health care costs in the 1-year post-index period versus healthy controls. **CONCLUSIONS:** The real-world management of GAD is both complex and costly. Paroxetine was the most-widely used first-line treatment for GAD. Benzodiazepines were the most widely used agents for augmentation of, or switching from, first-line treatments, and for second-line therapy. Total health care costs were 2.7 times higher for GAD patients compared with healthy controls.

PMH16

THE ECONOMIC AND HUMANISTIC BURDEN OF ILLNESS IN GENERALISED ANXIETY DISORDER (GAD): A RETROSPECTIVE DATABASE ANALYSIS IN EUROPE

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OBJECTIVES: There is a paucity of published evidence estimating the economic and humanistic burden of illness in GAD. We report results of a retrospective database analysis examining the burden of GAD in Europe. **METHODS:** Data were derived from the European (France, Germany, UK, Italy, Spain) National Health and Wellness Survey database for 2008. The database captures information from adults (≥18 years) and is representative of the adult population in each country. Respondents reporting a diagnosis of GAD were propensity-score matched 1:1 to non-GAD controls on country, age, gender and employment status. Data were extracted on GAD medication use, resource utilization (emergency room visits, hospitalizations and health care provider visits) and work productivity (using the Work Productivity and Activity Impairment questionnaire) to calculate direct and indirect costs. Health-related quality of life (HRQoL) was derived using SF-12 mental and physical summary scores. Utilities were derived from SF-6D preference scores and used to calculate cost per quality-adjusted life-year (QALY). **RESULTS:** Of 53,524 respondents, 3,669 were assigned to the GAD group. GAD respondents accrued considerably higher direct (medication and health care resources) plus indirect (work productivity loss) costs (per person/year) versus controls across pooled European countries (€5,308.80 vs. €2,441.10; $P < 0.0001$) and for each country (France €6,083.70 vs. €2,896.30; Germany €12,797.00 vs. €4,876.10; UK €4,021.70 vs. €2,011.20; Italy €3,514.50 vs. €1,869.60; Spain €5,051.70 vs. €1,954.80; $P < 0.0001$ vs. controls within each country). Direct costs were driven by hospitalizations and psychologist/psychiatrist visits. Total costs increased with GAD severity from €4,094.00 for respondents with mild GAD to €7,753.10 for those with severe GAD. HRQoL was significantly poorer for GAD versus non-GAD respondents ($P < 0.0001$). Costs/QALY increased with GAD severity from €6,795 for mild GAD to €15,286 for severe GAD. **CONCLUSIONS:** The economic and humanistic burden of illness of GAD across Europe is considerable and increases with the severity of disease.

PMH17

COST OF ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN GERMANY

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OBJECTIVES: Data concerning costs of patients with Attention deficit/hyperactivity disorder (ADHD) are scarce in Germany. Aim of this claims data analysis was to examine the costs of ADHD from the perspective of the statutory health insurance. **METHODS:** Nation-wide claims data of a major statutory health insurance fund was used to evaluate the overall and ADHD-related costs of ADHD-patients in 2008. All costs for outpatient care, inpatient care, pharmaceuticals, rehabilitation, occupational therapy as well as devices and aids, and sick leave payments were analyzed. To calculate ADHD-related costs the overall health care costs of the identified ADHD-patients were compared to an age and gender matched control group. **RESULTS:** Based on the used identification algorithm 30,264 ADHD-patients were identified. Mean overall costs of €3802 in the year 2008 were incurred from the health insurance perspective. €1704 (45%) were incurred by occupational therapy as well as devices and aids, and €779 (20%) were due to inpatient care; €751 (20%) resulted from outpatient care. Costs for pharmaceuticals were €483 (13%) and for rehabilitation were €35 (≤1%). Costs for sick leave payments came to €50 (1%). The matched control group contains 404,565 patients. Compared to this control group the incremental mean costs of ADHD-patients were EUR 2,744. EUR 1,214 of these resulted from occupational therapy as well as devices and aids, €586 from inpatient care and €517 from outpatient care. Mean additional costs for pharmaceuticals in the ADHD-group were €367. **CONCLUSIONS:** The major cost driver in ADHD from a health insurance perspective in Germany is occupational therapy as well as devices and aids.

PMH18

THE COSTS OF DEPRESSION IN SWITZERLAND

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OBJECTIVES: To investigate the burden of depression in the Swiss population. The costs for the management of depressive patients will be analyzed for different severity classes of disease, based on the Hamilton depression rating scale, over a period of 12 months following diagnosis. **METHODS:** A prospective, multicentre, non-interventional study in psychiatrist practices was carried out. Patients who have been diagnosed with depression in the last three years were included. Patient's characteristics and resource utilization in the first twelve months after diagnosis were collected. Costs analysis, subdivided in direct and indirect costs, was performed for three depression classes (mild, moderate, severe), according to the Hamilton depression score (HAMD-17). Costs were also extrapolated to the national level. **RESULTS:** A total of 556 patients were included. Hospitalization and hospitalization days were directly correlated with disease severity ($P < 0.001$). Medical resource utilization linked to depression and antidepressant treatments were also correlated to disease status. Severe patients reported a significantly higher number of workdays lost and were significantly more often in disability insurance. Total direct costs per person, mainly due to hospitalization costs, were CHF 4,823 for mild, CHF 13,251 for moderate, and CHF 22,138 for severe depressions. Indirect costs, mainly due to workdays lost, resulted in CHF 11,892 for mild, CHF 17,267 for moderate, and CHF 22,710 for severe depressions. Extrapolation at national level resulted in a total burden of about CHF 11 billion. **CONCLUSIONS:** The burden of depression in Switzerland was estimated to be around CHF 11 billion. Costs of depression were directly related to disease severity. However, since many depressions remain unreported and since this analysis only included individuals between 18 and 65 years of age, it is reasonable to suppose that the total burden of depression may be even greater.

PMH19

BURDEN OF ILLNESS OF TREATMENT RESISTANT DEPRESSION

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OBJECTIVES: Major depressive disorder (MDD) is a leading cause of disability, morbidity, and mortality worldwide. The lifetime prevalence in the US is 17%. Treatment resistant depression (TRD) is generally defined as failure to achieve remissions